

AN ASSEMBLAGE OF MONARCH BUTTERFLIES
(*DANAUS PLEXIPPUS* L.) ON THE NORTH
SHORE OF LAKE ERIE

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Several writers have recorded the occurrence of swarms of monarch butterflies along the north shores of the Great Lakes. Along Lake Erie, Saunders (3) records a swarm near Port Stanley, Moffat (2) reports seeing "the west shore of Long Point strewn for miles with their wrecks after a storm," and Moffat (1) and Savermer (4) record multitudes of monarchs assembling at Point Pelee. During a few days at the end of August, 1949, the writer witnessed a similar assemblage at Lake Erie not far from Dunnville, Ontario and a report on it is presented herewith.

The locality in which the main assemblage occurred is a woodlot of mixed hardwoods, about 100 yards square, in the southwest corner of Dunn Township in Haldimand County, Ontario. Its southern border is about 50 yards from the lake and its western border about 200 yards from the road forming the boundary between Dunn and South Cayuga Townships. The butterflies were first noted at 5:00 p.m. on August 28, when 32 were found clustered on a low branch on the north side of a beech tree in the middle of the wood. They were in an active condition, fluttering about the tree and settling and re-settling on the branch which was on the lee side of the tree, there being a light southwest wind. After 5:00 p.m. light rain began to fall and continued throughout the night. During the morning of the next day, August 29, a brisk north wind was blowing, becoming light in the afternoon, and the weather was generally sunny. At about 9:00 a.m. one monarch was seen flying about the southern border of the wood, at noon 12 were found on the south side of a beech on the southern border of the wood, and during the afternoon about 25 were present in groups of two to six on the branches of trees along the southern border. During the night a heavy thunderstorm occurred followed by a strong southwest wind off the lake.

During the morning and afternoon of August 30 the southwest

wind continued to blow strongly through the wood and did not slacken until 5:00 p.m. The sun was bright throughout the day and the only cloud was scattered cumulus, until after 5:00 p.m. when an overcast of altostratus formed. At 11:00 a.m. the lower branches of several trees along the northern border of the wood were found laden with monarchs and the following counts were made: red oak—16, white ash—15, ironwood (2)—6, 42, beech (2)—36, 143, sugar maple (5)—31, 36, 43, 50, 210, basswood (2)—56, 125, red cedar—115. In addition some fifty to one hundred butterflies were usually in flight, making a total of about 1000 in the wood. In any one cluster the insects were motionless except when a new arrival settled among them, causing a fluttering of wings. Throughout the day the clusters tended to remain on the same branches of the various trees on which they were first noted. When a stick was thrown into a cluster, the butterflies swirled off the branch and gyrated in the air, but after about ten minutes they began to reassemble on the same branch.

On August 31 the southwest wind remained brisk throughout the day. In the morning there were frequent showers, while in the afternoon clearing occurred. At 8:00 a.m. the monarchs were present in much the same numbers and distribution as on the previous day but were in a quiescent condition, there being little fluttering of wings and no flights from one cluster to another. As the day passed the insects became more active but maintained about the same distribution. At 10:00 a.m. another group of about 200 monarchs was found on trees near the lakeshore about one-half mile to the west in the neighboring township of South Cayuga. At 5:00 p.m. observations were discontinued owing to departure of observers from the vicinity.

In his discussion of the migrations of the monarch in North America, Williams (5) shows that these movements occur mainly toward the end of August and during September. The likelihood is that the congregation of butterflies recorded here was a pre-migratory assemblage and that they would shortly move off on their southward journey. During the four days that the butterflies were observed, they assembled in increasing numbers in the face of radical changes in the weather, and shifted about in the wood in such a way that they maintained positions on the

leeward side. Shannon, as quoted in Williams (5), concludes that one of the four main migratory routes of butterflies in North America is along Lake Ontario and Lake Erie and southward. The locality at which this assemblage was noted lies along this route, being near the Niagara River, which joins the two lakes.

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